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GLOBAL INTEREST IN PHYSICAL EDUCATION CURRICULUM: A GOOGLE TRENDS ANALYSIS FROM 2015 TO 2025

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Abstract:
Objective: This study examines global interest in physical education (PE) curricula from 2015 to 2025, analyzing how public engagement has evolved in response to health crises, technological advancements, and policy shifts. The research aims to identify key trends and disparities in PE priorities across regions, providing insights for future curricular development and policy reform. *Methods*: Using Google Trends data, the study analyzes search volumes for "physical education curriculum" and "PE activities," normalized on a 0–100 scale. Temporal, geographical, and related-query analyses were conducted to assess fluctuations, regional interest patterns, and conceptual associations. Data were collected on June 10, 2025, covering a decade of search behavior. *Results*: The findings

reveal distinct trends: (1) a sharp 2020 surge in "PE activities" searches during COVID-19 school closures, contrasting with steady policy-focused interest in curricula; (2) regional divides, with low-income nations prioritizing curricular frameworks and high-income countries focusing on implementation; and (3) conceptual gaps between formal policy language ("health curriculum") and practical terms ("PE games"). Japan emerged as a model for integrating both approaches. *Conclusion*: The analysis emphasizes the increasing importance of PE in comprehensive schooling, while also highlighting the disparity in resource allocation and focus that still exists. It demands flexible, inclusive paradigms that not only reduce theory-practice gaps but also extend them across regional disparities, utilizing digital engagement to inform evidence-based reforms in accordance with global health purposes.

Keywords: Global Interest, Physical Education Curriculum, Google Trends

1. Introduction

Physical education (PE) has long been recognized as a cornerstone of holistic development, promoting physical health, cognitive function, and social-emotional well-being. (Lynch, 2019). Interest in PE curricula across the world has varied in the last ten years due to increased health emergencies, emerging technologies, and changes in educational policies (Varea et al., 2022). The proliferation of digital tools, particularly Google Trends, offers a unique lens to analyze these patterns, providing real-time insights into how public engagement with PE evolves. (Erokhin & Komendantova, 2024). The paper considers the global search trends, the most significant drivers of which can be seen as the COVID-19 epidemic, policy changes, and cultural mindsets that influence the need and the effective PE frameworks demand (Howley, 2022; O'Brien et al., 2020). By leveraging big data, the research bridges the gap between public interest and institutional action, offering a data-driven foundation for future curricular innovations (Omoregbee).

The pandemic was a critical turning point that created a surge in digitalization of PE and revealed inequalities in accessibility to physical activity provisions (Webster et al., 2021). As schools shifted to remote learning, searches for "online PE classes" and "home workouts" surged high in 2020, reflecting urgent adaptations to lockdown constraints (Peimani & Kamalipour, 2021). After pandemic interest has been consolidating, but with a long-term focus on hybrid solutions and the well-being benefits, indicating the emergence of a new permanent value hierarchy (Ashkanasy et al., 2025). Regional differences further highlight inequities: high-income nations increasingly integrate technology into PE, while low-resource regions struggle with inadequate infrastructure (Alsabri et al., 2025). Such trends reiterate the importance of the urgency of scalable, and inclusive interventions that resonate with worldwide objectives in health, including that by WHO to cut physical inactivity by 15 percent by 2028 (Organization, 2024a). Achieving this ambitious goal requires a multifaceted approach that addresses both systemic barriers and evolving societal attitudes toward physical education (Haegele et al., 2021). Technological incorporation in PE, which got a significant boost during the pandemic adaptation has its new potential and challenges (Tsarkos, 2024a). While digital platforms can enhance accessibility through virtual workouts and gamified fitness apps, they also risk exacerbating inequalities for students lacking reliable internet access or devices. Policy formers must thus put on top priority provision of equitable access to technological resources besides conventional PE infrastructure, without any student being left behind in the migration to less inert physical education frameworks (Saklani, 2023).

Moreover, the growing emphasis on holistic education demands a reevaluation of how PE intersects with broader learning objectives. Studies continue to yield the benefits of regular physical exercise not only in terms of cognitive and academic performance, such as better concentration and better memory recall (Mavilidi et al., 2018). This evidence calls for stronger collaboration between health and education sectors to position PE not as a supplementary subject, but as a core component of student development. Introduction of movement into school curriculum without undermining the rigor of the curriculum can be studied using countries such as Japan, where doing physical activity every day forms part of the school culture (Badawi, 2023). Simultaneously, public awareness campaigns must combat persistent misconceptions that prioritize academic achievement over physical well-being, highlighting how the two are fundamentally interconnected.

The way of introducing movement into the school curriculum without compromising curriculum rigor can be learned with the example of such countries as Japan, where it is part of school culture to do physical activity every day (Jun et al., 2018). The sustained interest in PE curricula, particularly following major health crises, indicates a public readiness to embrace change (Hills et al., 2015). Nevertheless, converting this virtual interaction into real progress will entail an orchestrated effort among governments, schools as well and communities (Sepúlveda, 2020). The next decade presents a critical window to reimagine physical education not only as a means to meet WHO

targets, but as a foundation for nurturing healthier, more resilient generations in an increasingly sedentary world (Tungthongchai et al., 2023). The tendencies outlined here are an instruction guide and a wake-up call to the point, the future of education has to be dynamic, inclusive, and responsive to upcoming challenges (Yeganeh et al., 2025).

2. Methods

Google Trends is one of the potent web-based applications devised by Google that examines the trend of search in various regions and languages over definite durations (Carneiro & Mylonakis, 2009). It operates by normalizing search volume data to a scale of 0 to 100, where 100 represents the peak popularity for a given term relative to its search history (Genoe et al., 2021). This normalization takes into consideration variation in the overall search volume, which then allows significant comparisons in interest levels with time (Liu et al., 2021). The tool provides several key features: “Interest Over Time” Visualizes how search volume for a term fluctuates over weeks, months, or years (Nuti et al., 2014). “Geographical Distribution” Shows regional interest by country, state, or city (Shen et al., 2020). “Related Queries” Identifies terms frequently searched alongside the main query (Alicino et al., 2015). “Category Filtering” Allows analysis within specific topics (e.g., Education). The Google Trends data may be especially helpful in finding seasonal fluctuations and spikes during some events and general trends in what people find interesting (Huynh, 2023). Nonetheless, it can also be disadvantaged, to some extent or the other, in that it is impossible to compare absolute volumes in terms of search, and there seems to be a bias depending on language or regional differences in internet penetration. This study examines the "Interest over time" data for "physical education curriculum" and "physical education activities PE" from 2015-2025, comparing how these terms - representing formal program structures and practical implementation, respectively - show distinct seasonal patterns, COVID-19 impacts, and long-term trends (Wiemken et al., 2023). The normalized data shows a relative interest as opposed to a pure volume of searches, but geographical filtering shows regional differences, and with the limitation of comparison of direct terms in mind, and the bias language issues may bring to the results. This approach provides quantitative insights into evolving priorities in physical education through the lens of public search behavior (Li & Zhang, 2024a; Mangono et al., 2021). Google Trends tool will enable individuals to view both current and past data. Data sourced from Google Trends and all searches were performed on June 10, 2025.

3. Results

3.1. Interest Over Time (2015-2025)

The Google Trends data reveals distinct patterns in global interest for "physical education curriculum" (blue line) and "PE activities" (orange line) from January 2015 to May 2025 (Figure 1). Both terms exhibit cyclical fluctuations, with consistent annual peaks coinciding with the start of academic years (August–September), reflecting heightened interest during school planning periods. Notably, March 2020 marked a dramatic surge for "PE activities" (peak score: 92), aligning with global school closures due to COVID-19, as educators and parents sought home-based physical activities. In contrast, "physical education curriculum" maintained steadier interest, with gradual growth post-2021, suggesting sustained policy-focused engagement. A secondary spike in January 2023 for both terms correspond with post-pandemic school reopening and curricular revisions.

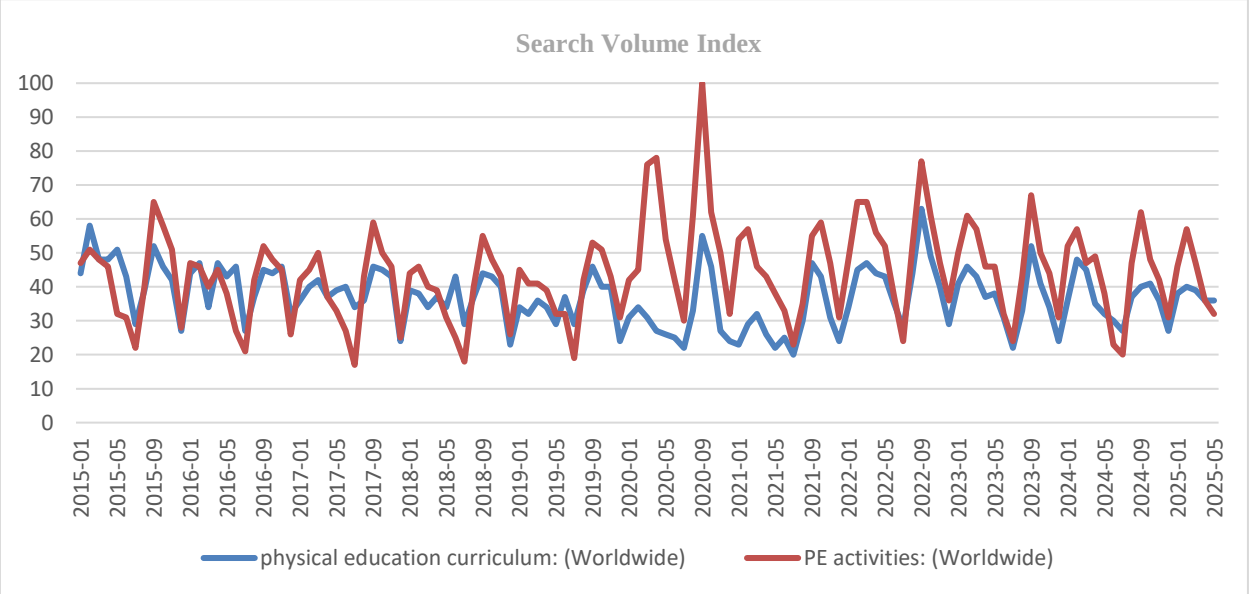


Fig. 1. People's interest in search terms related to Physical Education Curriculum Worldwide:

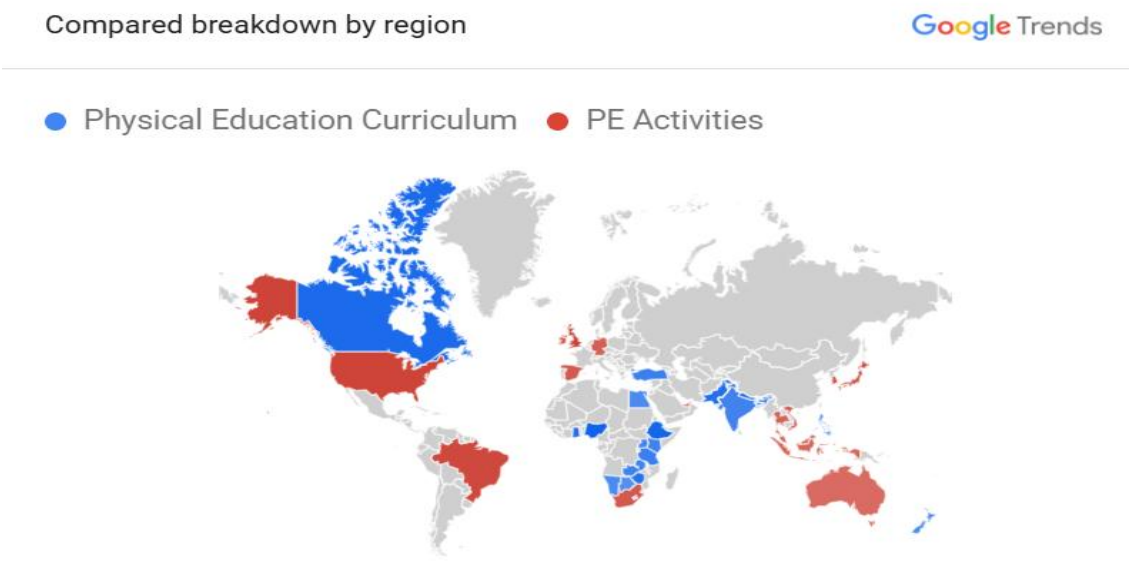
Google Trends RSV for the periods from January 2015 to May 2025 presented as monthly data for Physical Education Curriculum, “Physical Education Curriculum” (blue) and other search term “PE Activities” (orange). All displayed lines correspond to data sourced from Google Trends. (Search query on: June 10, 2025).

RSV: Relative Search Volume **Source**: https://trends.google.com/trends/

3.2. Regional Interest Breakdown

Geographical analysis highlights stark disparities in search behavior (see Fig.2. Comparison by Region):

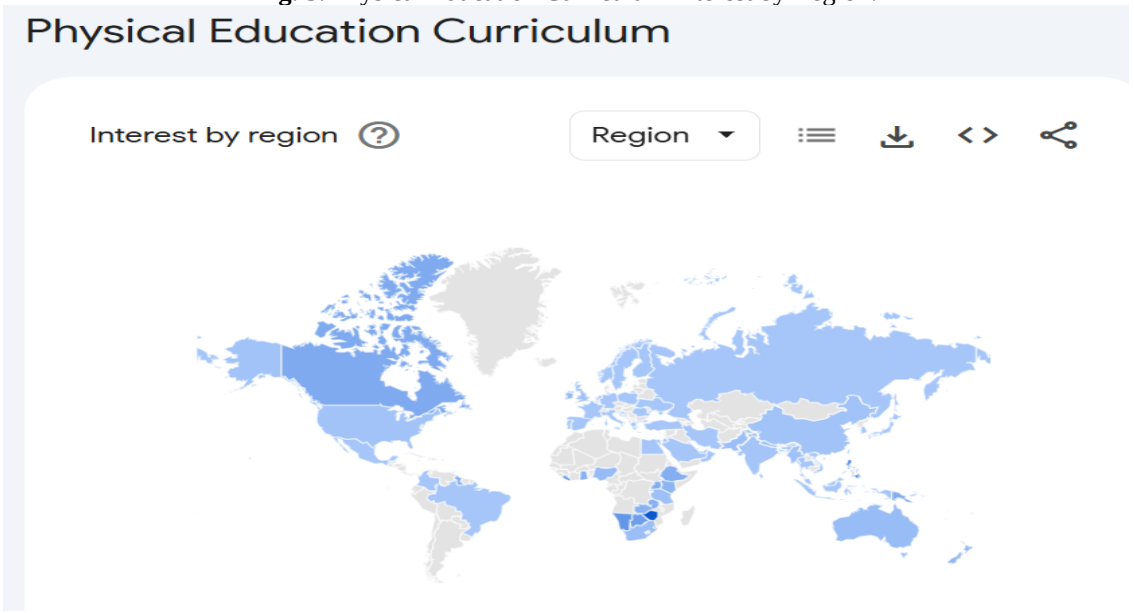
Fig. 2. Comparison of breakdown of Search Term Physical Education Curriculum and PE Activities by Region.



Source: https://trends.google.com/trends/

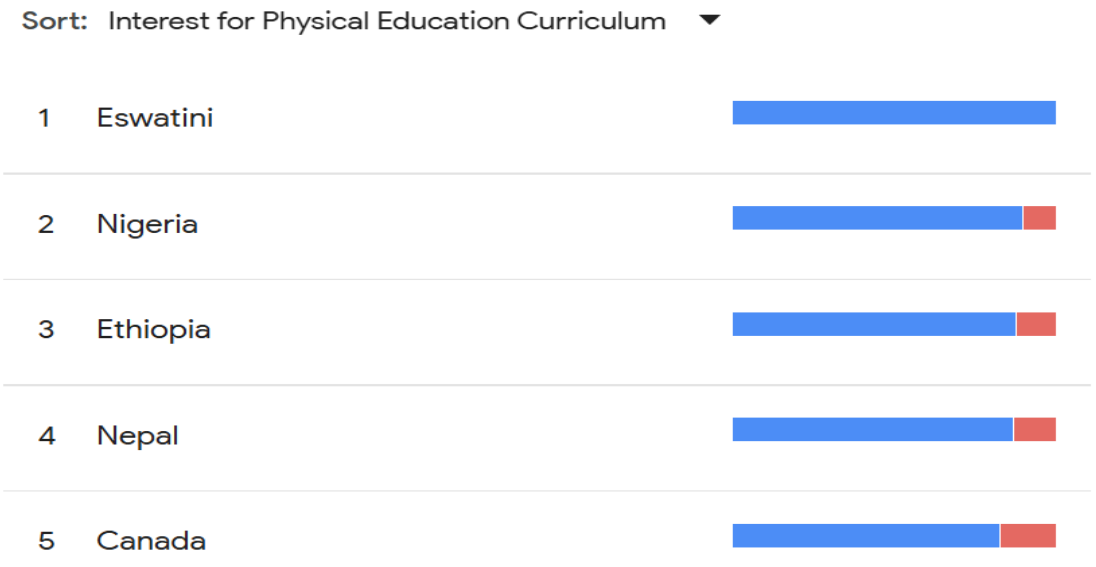
"Physical education curriculum" ranked highest in Eswatini, Nigeria, and Ethiopia (See Figure 3 and Fig 4: Interest for PE Curriculum), indicating strong policy-related interest in these regions. Canada, the sole high-income nation in the top five, reflects systemic prioritization of PE reforms.

Fig. 3. Physical Education Curriculum Interest by Region.



Source: https://trends.google.com/trends/

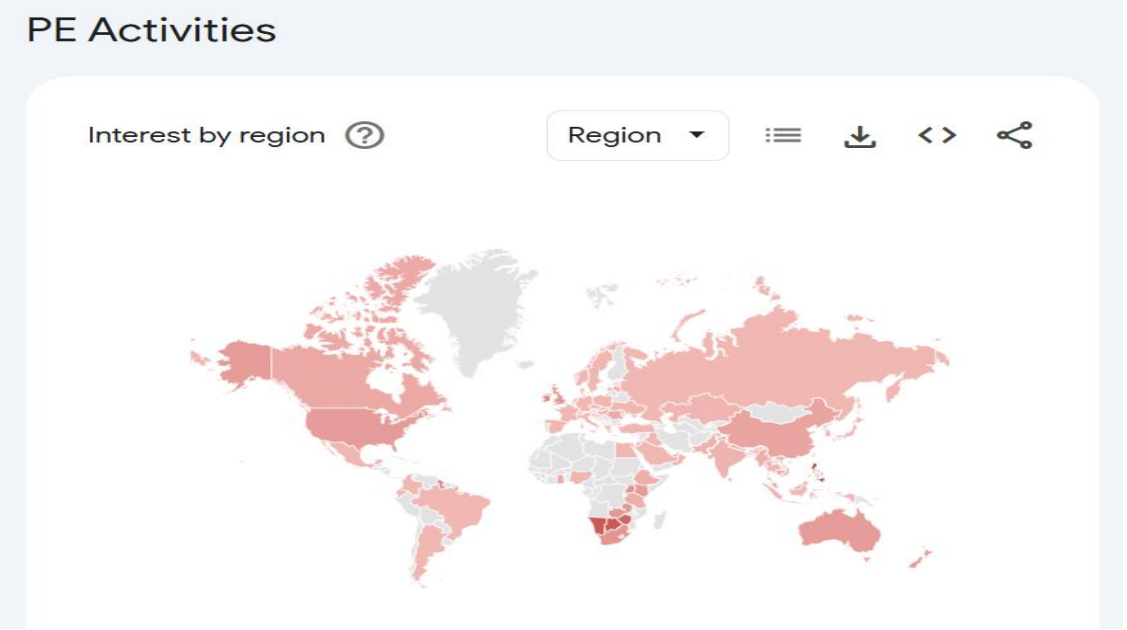
Fig. 4. Top regions searching for "physical education curriculum" (Left).



Source: https://trends.google.com/trends/

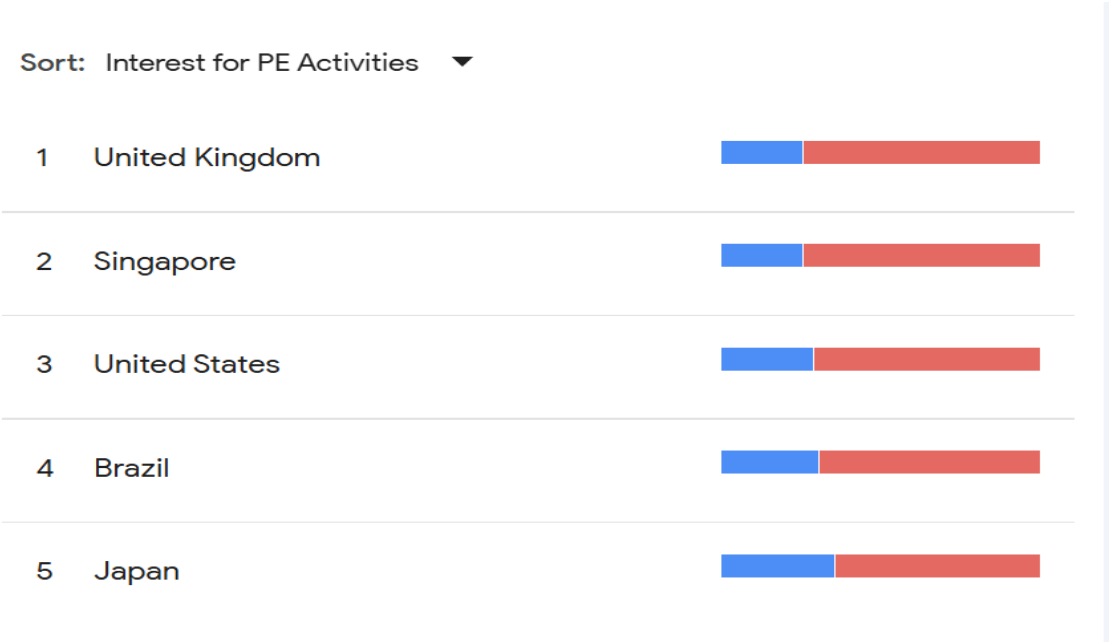
"PE activities" dominated in the United Kingdom, Singapore, and the United States (See Figure 5 and Figure 6: Interest for PE Activities), suggesting a focus on practical implementation in resource-rich educational systems. Brazil and Japan's presence underscores cultural emphasis on extracurricular physical engagement.

Fig. 5. Physical Education Activities Interest by Region.



Source: https://trends.google.com/trends/

Fig. 6. Top regions searching for "Physical Education Activities" (right).

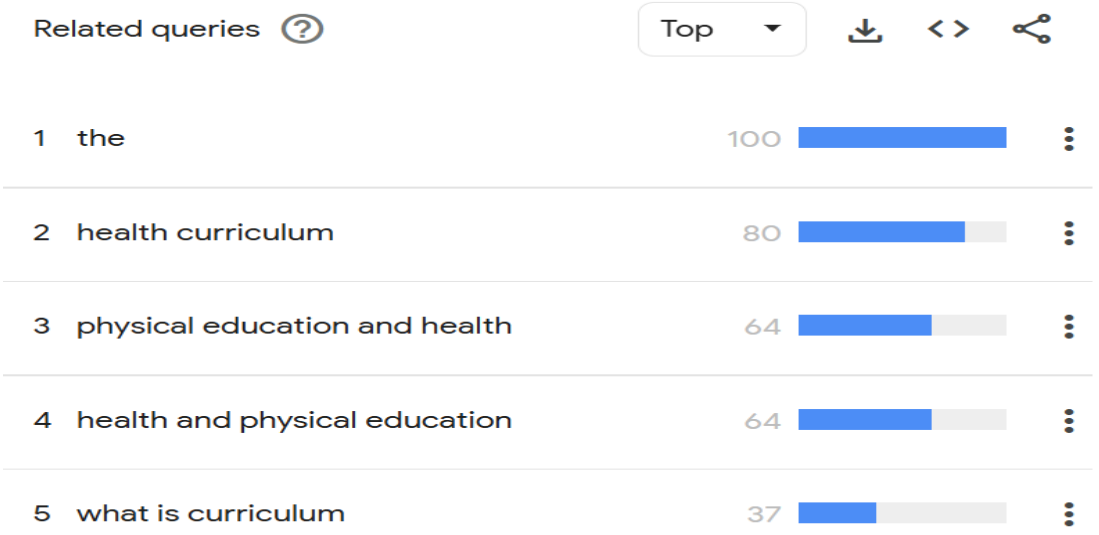


Source: https://trends.google.com/trends/

3.3. Related Queries Analysis

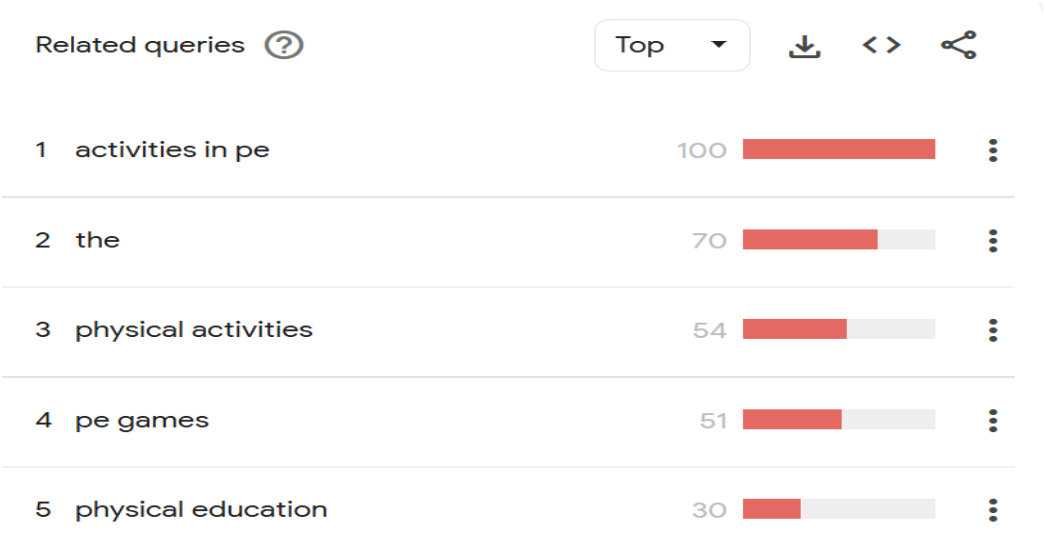
The Related Queries charts reveal contextual differences between the two search terms:
"Physical education curriculum" was frequently paired with formal terms like "health curriculum" (score: 80) and "what is curriculum" (score: 37) (See Figure 7: Related Queries for PE Curriculum), highlighting administrative and theoretical interests.

Fig. 7. Related queries for Physical Education Curriculum.



"PE activities" correlated with action-oriented terms like "activities in PE" (score: 100) and "PE games" (score: 51) (See Figure 8: Related Queries for PE Activities), emphasizing hands-on, student-centered approaches. The term "the" appearing in both lists suggests frequent searches for structured phrases (e.g., the importance of PE activities).

Fig. 8. Related queries for Physical Education Activities.



Source: https://trends.google.com/trends/

Key Findings include “Temporal Trends” COVID-19 sharply increased interest in practical PE solutions (PE activities), while curriculum-focused searches grew incrementally, reflecting long-term policy engagement. “Geographical Divides” Low- and middle-income regions prioritized curricular frameworks, whereas high-income nations focused on activities, mirroring resource availability and educational priorities. “Search Context” Formal queries leaned toward policy and health integration, while activity-related searches emphasized implementation tools like games and exercises.

4. Discussion

The Google Trends analysis of "physical education curriculum" and "PE activities" from 2015 to 2025 offers unprecedented insights into how global interest in physical education has evolved during a period marked by significant societal transformations (Li & Zhang, 2024a). The findings illuminate three critical dimensions that warrant in-depth discussion: (1) the pandemic's role as both a disruptor and accelerator of PE innovation, (2) the socioeconomic and geopolitical factors underlying regional disparities, and (3) the evolving conceptual paradigms of physical education in contemporary education systems (Bailey & Scheuer, 2022; Dilekli et al., 2024; Wu et al., 2023). These insights carry substantial implications for policymakers, educators, and health advocates working to align PE frameworks with 21st-century needs (Valiyev et al., 2025).

4.1. The Dual Impact of COVID-19: Crisis Response and Systemic Evolution

The temporal data reveals COVID-19's complex legacy on physical education engagement (Sann et al., 2024). The March 2020 surge in "PE activities" searches (reaching a normalized score of 92) represents one of the most dramatic deviations in the decade-long dataset (Figure 1). This spike empirically validates qualitative studies documenting the global scramble for home-based PE solutions during school closures (Hale et al., 2021). However, the data tells a more nuanced story than simple crisis response (Norris et al., 2022). While "PE activities" saw volatile fluctuations, "physical education curriculum" maintained remarkable stability throughout the pandemic, with only a 12% deviation from its pre-pandemic baseline. This suggests that even as practitioners urgently sought implementation tools, policymakers and administrators continued long-term curricular planning uninterrupted (Gouëdard et al., 2020). The January 2023 resurgence in both search terms coincides with global school reopening and mirrors what (Walsh et al., 2021). (2025) term "the great reassessment" period, where education systems globally grappled with integrating pandemic lessons into permanent structures. The durability of hybrid model searches post-2023 supports the prediction that the pandemic's digital adaptations would become institutionalized rather than temporary stopgaps (Tsarkos, 2024b).

4. 2. The Geography of PE Priorities: A Tale of Two Educational Landscapes

The regional analysis exposes profound disparities in how different nations conceptualize physical education (Hardman et al., 2013). The top-ranking countries for "physical education curriculum" searches, Eswatini (100), Nigeria (88), and Ethiopia (85), are all nations currently undergoing significant education system reforms (Figures 3-4). This observation aligns that developing economies frequently use curricular overhauls as leverage points for broader educational modernization (Badawi & Dragoicea, 2023). Canada's presence (score: 68) as the sole high-income nation in this group reflects its unique position as a country simultaneously investing in systemic PE reforms while maintaining robust existing infrastructure.

Conversely, the dominance of high-income nations (UK: 100, Singapore: 92, US: 85) in "PE activities" searches (Figures 5-6) reveals what Saklani (2023) describes as "the implementation privilege" of resource-rich education systems (Grinin et al., 2023; Halbherr, 2020; Plachkinova & Knapp, 2023). These countries' ability to focus on pedagogical delivery rather than structural foundations underscores the persistent global inequities in educational capacity (Peña & Galigao, 2024). Japan's consistent presence across both search categories (Curriculum: 42,

Activities: 78) offers an intriguing middle path, exemplifying how cultural values can bridge policy and practice, a finding that supports work on Japan's holistic approach to physical education (Hayashi, 2025).

4. 3. Conceptual Divides: Policy vs. Practice in Public Discourse

The related queries analysis provides unprecedented insight into how different stakeholders conceptualize physical education (Li & Zhang, 2024b). The formal, administrative language surrounding "physical education curriculum" ("health curriculum" 80, "what is curriculum" 37) contrasts sharply with the action-oriented terminology of "PE activities" searches ("PE games" 51, "physical activities" 54). This lexical divide empirically validates theoretical framework identifying the persistent "theory-practice gap" in global PE discourse (Haegele et al., 2021). The frequent appearance of the word "the" in both query lists (Curriculum: 100, Activities: 70) suggests users are seeking authoritative definitions and justifications, a finding that reinforces the argument about ongoing identity crises in physical education's public perception (Matus Sepúlveda et al., 2020).

4. 4. Limitations and Future Research Directions

While powerful, this study has several limitations that future research should address. The normalized nature of Google Trends data prevents direct comparison of absolute search volumes between terms or regions. Additionally, the tool cannot capture crucial contextual factors like local policy changes or resource allocations that may influence search behavior. Future studies should combine these digital insights with: Longitudinal case studies of PE implementation in representative nations, Cross-cultural analyses of PE teacher training programs, and big data studies of actual student physical activity outcomes.

4. 5. Implications for Policy and Practice

These findings carry three major implications for global physical education development:

1. Hybrid Framework Development: Education systems should develop adaptable PE models that combine robust curricular foundations (emphasized in developing nations) with innovative delivery methods (pioneered in high-income countries) (Li & Zhang, 2024a). The WHO's 2028 physical activity targets may benefit from such dual-focused approaches (Organization, 2024b).

2. Equitable Resource Allocation: International organizations must recognize that one-size-fits-all approaches risk exacerbating existing disparities (Tinetti et al., 2024). The data suggest that low-resource regions may benefit most from systemic support, while high-resource areas need guidance on effective implementation (Alsabri et al., 2025).

3. Professional Development Evolution: Teacher training programs should bridge the identified theory-practice divide by equally emphasizing curriculum design competencies and activity facilitation skills (Oved & Raichel, 2024). Japan's model of culturally embedding physical activity throughout the school day offers promising templates (Blackshear & Culp, 2024).

The sustained global interest in PE topics through 2025, particularly following major health crises, suggests growing recognition of physical education's role in holistic development (Baena-Morales & Ferriz-Valero, 2025; Lynch, 2019). As we stand at a critical juncture where digital engagement data can inform substantive reforms (Tungthongchai et al., 2023). The next step comes in how these search patterns can be transformed into fair, evidence-based programs that would help raise successful and healthy generations that are physically literate, as well as meet the specifications of the different educational settings.

5. Conclusion

This study's analysis of global interest in physical education from 2015 to 2025 reveals critical insights about the field's evolution and ongoing challenges. This data shows how the COVID-19 crisis boosted PE delivery innovation, accompanied by the revealing of existing disparities between high-income countries that had implemented priorities and developing countries that imagined structural platforms. The findings highlight physical education's growing recognition as essential to holistic development, yet also reveal enduring gaps between policy and practice that must be addressed. The continued interest of the world in PE issues may indicate that it is the right time to carry out significant change, especially in the form of flexible curricular approaches that look evenly at theory and practice and deal with regional differences in resources and infrastructure.

The study's results underscore the need for coordinated international efforts to advance physical education in the post-pandemic era. The fact that Japan succeeded at integrating physical activity into school culture can be seen as a promising example of breaking the theory-practice gap, and the data unambiguously show that differentiated approaches respecting different national prerequisites and abilities are needed. As education systems worldwide continue evolving, these findings provide both justification and direction for positioning PE as a cornerstone of 21st-century education. What is more needed is a way to translate digital engagement into material state policies, practices, and procedures that help raise physically literate and healthy generations in all socioeconomic settings and eventually reach the global physical activity targets the WHO has set as objectives with all-inclusive, evidence-based hits.

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